GOVERNMENT OF INDIA
ATOMIC ENERGY
LOK SABHA

UNSTARRED QUESTION NO:1908
ANSWERED ON:21.07.2004
IRRADIATION OF DIAMONDS
Kamat Shri Gurudas

Will the Minister of ATOMIC ENERGY be pleased to state:

(a) whether the process of irradiation of diamonds at Bhabha Atomic Research Centre has come to the notice of the Government;

(b) if so, the details thereof; and

(c) the steps proposed to be taken to mitigate the harmful effects likely to be caused due to irradiation?

Answer

THE MINISTER OF STATE IN THE PRIME MINISTER`S OFFICE (SHRI PRITHVIRAJ CHAVAN)

(a) Yes, Sir. The process of irradiation of diamonds with electrons is carried out by the Board of Radiation & Isotope Technology (BRIT), a constituent unit of the Department of Atomic Energy.

(b) The value of semi precious stones can be enhanced by irradiating them with electrons. Currently electron irradiation of off-grade quality diamond is carried out by the BRIT in collaboration with agencies in diamonds for enhancing the colour of this product which leads to substantial value addition. Electron irradiation does not induce any radioactivity in the irradiated diamonds/precious stones.

(c) Does not arise. It may be mentioned that irradiation of diamondslpreciousstones by neutrons results in inducing a low level (within permissible limits) of radioactivity. This practice exists in some countries. In India practice of using neutrons for irradiation of diamonds was discontinued since early 1990s. Presently, therefore, irradiation of diamonds is done only with electrons which as mentioned above, does not induce any radioactivity in the irradiated diamonds.